

Item #16b: Grizzly Bear Habitat

Evaluation Objectives: To evaluate changes in grizzly bear habitat suitability and relationship to land management practices.

Methods: Habitat suitability is measured using three methods:

- A cumulative effects model (CEM) that incorporates and integrates vegetation, terrain characteristics, and human activity impacts on the grizzly bear. The CEM evaluates the potential natural habitat value (HV) compared to the habitat effectiveness (HE), the habitat value as affected by existing human activity.
- Human access is an important element in relation to mortality risk and habitat use for grizzly bears. Reporting requirements for amendment 19 (A-19) including meeting certain percentages for open road density (19%), total road density (19%) and security core (68%) for 40 subunits that have at least 75% NFS lands and no net increase in open or total road density and no net decrease of core due to Forest Service action for 14 subunits that have less than 75% of NFS lands.
- A biological evaluation (assessment) is required during project analysis to assess effects to grizzly bears (and for all listed species). No effect, not likely to adversely affect, and may affect determinations are made based on potential effects of management actions. Levels of consultation with the Fish and Wildlife Service vary depending on the determination made by the project biologist.

Evaluation:

Method 1

The Grizzly Bear Recovery Plan (1993) states “Once complete, application of the CEM in each ecosystem every 5 years by the land management agencies would allow reassessment of effective habitat and indicate trends in habitat effectiveness.” Cumulative Effects Analysis (CEA) implemented through the CEM is an assessment of how the combination of natural processes and events, and human activities cause resources and environmental conditions in an area to change over time. A CEA results in an assessment of harmful, neutral, or beneficial effects to grizzly bear habitat, and thus changes in habitat effectiveness brought on by various natural and human variables.

A 1998 CEM baseline was completed and an update to the CEM was completed in 2008 using 2005 land imagery. The results by bear management unit (BMU) were shown in the previous monitoring report. The Flathead National Forest (FNF) includes parts of 11 grizzly BMUs which are further divided into 73 bear management subunits. The Stillwater River BMU is not included as the BMU only contains 11% NFS lands, most of which are located along the Whitefish Divide. However, at this time due to limited experience in running and evaluating the current model, use caution when comparing the two data sets as modelling parameters changed between years. The later year’s base layer (2005) can’t be compared to the previous layer (1998) and the habitat effectiveness compared to habitat value at this time can only be compared within years and not between years.

No CEM has been completed since 2008. However the CEM GIS specialist has been assigned various tasks associated with completing the cooperative efforts of the NCDE Grizzly Bear Conservation Strategy. These tasks identified a need to update the CEM database with human point and polygon activity features for the year 2009.

The CEM is just one of the tools to review land use management effects. The level of activities mapped for CEM if looked at by their sheer numbers, distribution, and level of use (roads) might be used to gauge the increase/decrease of human activity impacts over a landscape view. Unfortunately, there is very little basis to say what a 1% or 10% increase or reduction in habitat effectiveness (HE) really means to a bear population. However, the assumption among bear biologists is that a small change from the existing HE is a lesser impact than a larger change and there is less risk to a bear or its habitat. Still, if evaluating effects from a proposed project, CEM outputs provide a relative measure of each alternative's impacts. At this time, amendment-19 of the Forest Plan reporting (method 2 below) is considered a better tool than CEM for gauging progress on grizzly bear habitat conditions from forest management actions.

Method 2.

2) General Summary of Grizzly Bear Management Unit Subunits

There are 73 bear subunits on the forest; 16 subunits are primarily wilderness or unroaded and 3 have only a fraction of NFS lands. These 19 subunits are not affected by Forest Plan Amendment-19 (A-19). The remaining 54 subunits that are influenced by motorized access are used for A-19 analysis. The Amendment 19 annual monitoring report is available for years 1995-2010. These reports display open and total motorized access densities and security core area during each year for the 54 A-19 subunits. The reports display the compliance levels by subunit with the A-19 objectives. Implementation of A-19 is intended to increase the forest area having suitable access conditions for adult female grizzly bears. The reports show incremental implementation progress since 1995 as management projects are completed. Access is managed by gates, berms, removal of culverts or bridges and road reclamation.

Tables 16b-1 and 16b-2 display the existing status of the 54 subunits. Thirty-seven of the 54 subunits (69%) meet or exceed all A-19 or amended A-19 objectives. This is an improvement since the last monitoring report when 33 subunits (61%) met or bettered the 19% all A-19 or Amended A-19 objectives. Six subunits meet two objectives, seven meet 1 objective, and 4 subunits do not meet any objective. Fifty of 54 subunits (93%) meet at least one objective. In the previous reporting period ending in 2007 forty-three of 54 subunits (80%) were reported to meet at least one objective. This improvement is a direct reflection of the nearly 126 miles of road reclaimed from 2008-2010.

Tables 16b 3-8 show changes within each subunit since 1995 for open road density (ORD), total road density (TRD) and CORE. Thirty-three of 40 subunits (82.5%) with >75% NFS lands meet or are less than 19% ORD (28 subunits) or meet the amended objectives (5 subunits). One additional subunit is at 20% ORD; 3 subunits are between 21 and 30 percent; and 3 subunits are over 30 percent. This is an improvement since the last monitoring report when 24 subunits (60%) met or bettered the 19% or amended objective for ORD. The last monitoring report for the 40 subunits where NFS lands are greater than 75% of the area showed 22 subunits had decreased in ORD, 13 subunits stayed the same and 5 subunits increased. Improvements were

made in these conditions since 2008 where there are now 27 subunits with decreased ORD, 10 subunits staying the same and 3 subunits with minor increases in ORD percents. Subunits with increases are a result of database updates to correct an error or update trail use classification for motorized use.

Thirty-one of 40 subunits (77.5%) with >75% NFS lands meet or are less than 19% TRD (29 subunits) or meet the amended objectives (2 subunits). Two additional subunits are at 20% TRD; 5 subunits are between 21 and 30 percent; and 2 subunits are over 30 percent. This is an improvement since the last monitoring report when 24 subunits (60%) met or bettered the 19% or amended objective for TRD. The last monitoring report for the 40 subunits where NFS lands are greater than 75% of the area showed 28 units had decreased in TRD, 11 subunits stayed the same and 1 subunit increased due to the acquisition of private lands and the inclusion of trails not originally included as motorized. These are the same conditions for 2010.

Twenty-five of 40 subunits (60%) with >75% NFS lands meet or are less than 19% CORE (23 subunits) or meet the amended objective (1 subunit). Six additional subunits are at 62% or greater CORE; and 10 subunits are less than 60% percent. This is an improvement since the last monitoring report when 19 subunits (48%) met or bettered the 68% or amended objective for CORE. The last monitoring report for the 40 subunits where NFS lands are greater than 75%, showed 33 units had increased in CORE habitat, 5 units stayed the same and 2 subunits decreased due to corporate lands update and a data base correction. Improvements were made in these conditions since 2008 where there are now 38 subunits with increased CORE, 1 subunit staying the same and 1 subunit with a minor decrease.

The remaining 14 of the 54 subunits have less than 75% NFS lands in the subunit. ORD in all 14 subunits, TRD in 7 subunits and CORE in 7 subunits have improved habitat conditions. All of these units currently meet the “no net loss” objectives as specified in A-19. Changes shown in percentages for route densities and CORE are due to an assortment of situations: 1) changes in access management on NFS, access management on Plum Creek, Montana DNRC, and construction on small private lands; 2) land exchanges that affected the total small private lands; 3) corrections to the forest’s road database based upon field inspections and not from a change in NFS road management. Both Plum Creek and the DNRC utilize gates for access management which explains why ORD shows more improvement than TRD and CORE in these 14 subunits.

Additional administrative use restrictions have occurred since 2005 on subunits where FS ownership is >75%, where amendment 19 TRD objectives are not being met, and where no projects exist with timeframes for reaching those objectives have been implemented to simulate improved security core conditions.

Table 16b-1. Existing June 2011 Status of BMU Subunits Where NF Ownership >75%.

#	BMU Subunit	RD	OPEN Route Density	TOTAL Route Density	CORE Security
1	Frozen Lake	GV	10	4	81
2	Ketchikan	GV	16	3	68
3	Upper Trail	GV	14	4	88
4	Lower Whale (amended 37-19-47)	GV	36	17	47
5	Upper Whale Shorty	GV	12	10	86

#	BMU Subunit	RD	OPEN Route Density	TOTAL Route Density	CORE Security
6	Red Meadow Moose	GV	25	17	55
7	Hay Creek	GV	25	13	55
8	Coal and South Coal	GV	15	24	70
10	Werner Creek (amended 29-19-63)	GV	19	21	42
11	Lower Big Creek	GV	18	20	66
12	Canyon McGinnis (amended 19-33-53)	GV/TL	19	31	51
17	Peters Ridge	HH/SL	52	25	34
19	Swan Lake	SL	41	26	45
25	Crane Mountain	SL	32	60	25
31	Beaver Creek	SL	6	25	66
32	Doris Lost Johnny (amended 57-19-36)	HH	57	18	36
33	Wounded Buck Clayton (amended 27-30-65)	HH	27	28	64
35	Emery Firefighter	HH	19	20	53
36	Riverside Paint	HH	18	16	72
37	Jewel Basin Graves	HH	19	19	63
38	Wheeler Quintonkon (amended 25-19-68)	HH/SB	25	18	62
39	Logan Dry Park	HH/SB	30	33	52
40	Lower Twin	SB	9	2	91
41	Twin Creek	SB	0	0	100
42	Moccasin Crystal	HH	8	1	81
43	Stanton Paola	HH	8	3	81
44	Dickey Java	HH	9	0	83
45	Long Dirtyface	HH	0	0	100
46	Tranquil Geifer	HH	0	2	85
47	Skyland Challenge	HH	20	17	63
48	Plume Mtn Lodgepole	HH/SB	0	0	97
49	Flotilla Capitol	HH/SB	0	0	99
50	Ball Branch	SB	8	4	84
51	Kah Soldier * updated 5/20/11	SB	19	18	68
52	Spotted Bear Mtn	SB	19	18	68
53	Big Bill Shelf	SB	11	2	80
54	Jungle Addition * updated 5/20/11	SB	19	17	68
55	Bunker Creek	SB	5	3	92
56	Gorge Creek	SB	0	0	90
57	Harrison Mid	SB	1	0	95

Subunits meet LMRP A19 objective.

Subunits meet site specific amendment.

Table 16b-2. Existing 2010 status of BMU Subunits Where NF ownership <75%.

#	BMU Subunit	RD	OPEN Route Density	TOTAL Route Density	CORE Security
9	State Coal Cyclone	GV	31	25	59
13	Cedar Teakettle	GV	25	23	25
18	Noisy Red Owl	SL	24	17	52
20	South Fork Lost Soup	SL	25	48	40
21	Goat Creek	SL	23	59	42
22	Lion Creek	SL	19	46	41
23	Meadow Smith	SL	21	53	41
24	Buck Holland	SL	24	41	41
26	Porcupine Woodward	SL	28	72	15
27	Piper Creek	SL	19	43	52
28	Cold Jim	SL	18	56	43

#	BMU Subunit	RD	OPEN Route Density	TOTAL Route Density	CORE Security
29	Hemlock Elk	SL	6	30	64
30	Glacier Loon	SL	23	43	41
34	Coram Lake Five	HH	26	46	14

Subunits meet LMRP A19 objective of no net increase/decrease due to FS actions.

Table 16b-3. Subunit % Open Route Density for BMU Subunits Where NF Ownership >75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
1	Frozen Lake	GV	10	10		
2	Ketchikan	GV	19	16		-3
3	Upper Trail	GV	18	14		-4
4	Lower Whale (amended 37%)	GV	60	36	36	-24
5	Upper Whale Shorty	GV	17	12		-5
6	Red Meadow Moose	GV	36	25	25	-11
7	Hay Creek	GV	33	25	25	-8
8	Coal and South Coal	GV	23	15		-8
10	Werner Creek (amended 29%)	GV	43	19	29	-22
11	Lower Big Creek	GV	35	18	18	-17
12	Canyon McGinnis	GV/TL	34	19	19	-15
17	Peters Ridge	HH/SL	50	52		+2
19	Swan Lake	SL	56	41	41	-15
25	Crane Mountain	SL	51	32	24	-19
31	Beaver Creek	SL	6	6		
32	Doris Lost Johnny (amended 57)	HH	58	57	57	-1
33	Wounded Buck Clayton (amended 27)	HH	38	27	27	-11
35	Emery Firefighter	HH	32	19	19	-13
36	Riverside Paint	HH	23	18	18	-5
37	Jewel Basin Graves	HH	22	19	19	-3
38	Wheeler Quintonkon (amended 25)	HH/SB	28	25	25	-3
39	Logan Dry Park	HH/SB	33	30		-3
40	Lower Twin	SB	9	9		
41	Twin Creek	SB	0	0		
42	Moccasin Crystal	HH	7	8		+1
43	Stanton Paola	HH	12	8		-4
44	Dickey Java	HH	10	9		-1
45	Long Dirtyface	HH	0	0		
46	Tranquil Geifer	HH	0	0		
47	Skyland Challenge	HH	15	20		+5
48	Plume Mtn Lodgepole	HH/SB	0	0		
49	Flotilla Capitol	HH/SB	0	0		
50	Ball Branch	SB	41	8	8	-33
51	Kah Soldier * updated 5/20/11	SB	39	19	19	-19
52	Spotted Bear Mtn	SB	20	19	19	-1
53	Big Bill Shelf	SB	12	11		-1
54	Jungle Addition * updated 5/20/11	SB	38	19	19	-18
55	Bunker Creek	SB	12	5		-7
56	Gorge Creek	SB	0	0		
57	Harrison Mid	SB	1	1		

Subunits meet LMRP A19 objective.

Subunits meet site specific amendment.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Open Route Density within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.
 - indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

Table 16b-4. Subunit % Open Route Density for BMU Subunits Where NF Ownership <75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
9	State Coal Cyclone	GV	39	31		-8
13	Cedar Teakettle	GV	32	25		-7
18	Noisy Red Owl	SL	26	24	24	-2
20	South Fork Lost Soup	SL	60	25		-35
21	Goat Creek	SL	27	23		-4
22	Lion Creek	SL	24	19		-5
23	Meadow Smith	SL	23	21	21	-2
24	Buck Holland	SL	25	24	24	-1
26	Porcupine Woodward	SL	48	28	28	-20
27	Piper Creek	SL	21	19		-2
28	Cold Jim	SL	21	18	18	-3
29	Hemlock Elk	SL	13	6		-7
30	Glacier Loon	SL	25	23	23	-2
34	Coram Lake Five	HH	30	26		-4

Subunits meet LMRP A19 objective of no net increase/decrease due to FS actions.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Open Route Density within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.

- indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

Table 16b-5. Subunit % Total Route Density for BMU Subunits Where NF Ownership >75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
1	Frozen Lake	GV	6	4		-2
2	Ketchikan	GV	5	3		-2
3	Upper Trail	GV	5	4		-1
4	Lower Whale	GV	44	17	17	-27
5	Upper Whale Shorty	GV	13	10		-3
6	Red Meadow Moose	GV	25	17	17	-8
7	Hay Creek	GV	21	13	13	-8
8	Coal and South Coal	GV	37	24		-13
10	Werner Creek	GV	48	21	19	-27
11	Lower Big Creek	GV	39	20	18	-19-
12	Canyon McGinnis (amended 33)	GV/TL	44	31	32	13
17	Peters Ridge	HH/SL	25	25		
19	Swan Lake	SL	33	26	26	-7
25	Crane Mountain	SL	75	60	27	-15
31	Beaver Creek	SL	24	25		+1
32	Doris Lost Johnny	HH	31	18	19	-13
33	Wounded Buck Clayton (amended 30)	HH	49	28	30	-21
35	Emery Firefighter	HH	42	20	19	-22
36	Riverside Paint	HH	39	16	16	-23
37	Jewel Basin Graves	HH	26	19	19	-7
38	Wheeler Quintonkon	HH/SB	33	18	19	-15
39	Logan Dry Park	HH/SB	40	33		-7
40	Lower Twin	SB	2	2		

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
41	Twin Creek	SB	0	0		
42	Moccasin Crystal	HH	1	1		
43	Stanton Paola	HH	3	3		
44	Dickey Java	HH	1	0		-1
45	Long Dirtyface	HH	0	0		
46	Tranquil Geifer	HH	2	2		
47	Skyland Challenge	HH	18	17		-1
48	Plume Mtn Lodgepole	HH/SB	0	0		
49	Flotilla Capitol	HH/SB	0	0		
50	Ball Branch	SB	21	4	2	-17
51	Kah Soldier	SB	45	18	18	-27
52	Spotted Bear Mtn	SB	32	18	18	-14
53	Big Bill Shelf	SB	7	2		-5
54	Jungle Addition	SB	31	17	19	-14
55	Bunker Creek	SB	6	3		-3
56	Gorge Creek	SB	0	0		
57	Harrison Mid	SB	0	0		

Subunits meet LMRP A19 objective.

Subunits meet site specific amendment.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Total Route Density within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.

- indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

Table 16b-6. Subunit % Total Route Density for BMU Subunits Where NF Ownership <75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
9	State Coal Cyclone	GV	29	25		-4
13	Cedar Teakettle	GV	30	23		-7
18	Noisy Red Owl	SL	18	17	17	-1
20	South Fork Lost Soup	SL	47	48		+1
21	Goat Creek	SL	49	59		+10
22	Lion Creek	SL	39	46		+7
23	Meadow Smith	SL	52	53	53	+1
24	Buck Holland	SL	44	41	41	-3
26	Porcupine Woodward	SL	59	72	65	-13
27	Piper Creek	SL	30	43		-13
28	Cold Jim	SL	56	56	56	
29	Hemlock Elk	SL	29	30		+1
30	Glacier Loon	SL	39	43	43	+4
34	Coram Lake Five	HH	49	46		-3

Subunits meet LMRP A19 objective of no net increase/decrease due to FS actions.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Total Route Density within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.

- indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

Table 16b-7. Subunit % Security CORE for BMU Subunits Where NF Ownership >75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
1	Frozen Lake	GV	80	81		+1

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
2	Ketchikan	GV	65	68		+3
3	Upper Trail	GV	84	88		+4
4	Lower Whale (amended 47)	GV	7	47	47	+40
5	Upper Whale Shorty	GV	80	86		+6
6	Red Meadow Moose	GV	47	55	68	+8
7	Hay Creek	GV	41	55	55	+14
8	Coal and South Coal	GV	59	70		+11
10	Werner Creek (amended 63)	GV	35	42	62	+7
11	Lower Big Creek	GV	38	66	69	+28
12	Canyon McGinnis (amended 53)	GV/TL	31	51	51	+20
17	Peters Ridge	HH/SL	30	34		+4
19	Swan Lake	SL	29	45	45	+16
25	Crane Mountain	SL	0	25	32	+25
31	Beaver Creek	SL	67	66		-1
32	Doris Lost Johnny (amended 36)	HH	35	36	36	+1
33	Wounded Buck Clayton (amended 65)	HH	33	64	65	+31
35	Emery Firefighter	HH	38	53	68	+15
36	Riverside Paint	HH	58	72	71	+14
37	Jewel Basin Graves	HH	50	63	68	+13
38	Wheeler Quintonkon	HH/SB	49	62	68	+13
39	Logan Dry Park	HH/SB	50	52		+2
40	Lower Twin	SB	91	91		
41	Twin Creek	SB	97	100		+3
42	Moccasin Crystal	HH	80	81		+1
43	Stanton Paola	HH	75	81		+6
44	Dickey Java	HH	80	83		+3
45	Long Dirtyface	HH	95	100		+5
46	Tranquil Geifer	HH	75	85		+10
47	Skyland Challenge	HH	58	63		+5
48	Plume Mtn Lodgepole	HH/SB	79	97		+18
49	Flotilla Capitol	HH/SB	78	99		+21
50	Ball Branch	SB	50	84	85	+34
51	Kah Soldier	SB	43	68	68	+25
52	Spotted Bear Mtn	SB	49	68	68	+19
53	Big Bill Shelf	SB	70	80		+10
54	Jungle Addition	SB	53	68	68	+15
55	Bunker Creek	SB	69	92		+23
56	Gorge Creek	SB	87	90		+3
57	Harrison Mid	SB	91	95		+4

Subunits meet LMRP A19 objective.

Subunits meet site specific amendment.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Security CORE within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.

- indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

Table 16b-8. Subunit % Security CORE for BMU Subunits Where NF Ownership <75%.

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
9	State Coal Cyclone	GV	47	59		+12
13	Cedar Teakettle	GV	22	25		+3
18	Noisy Red Owl	SL	48	52	52	+4

#	BMU Subunit	RD	Jan 1995 existing	2010 existing	NEPA decision*	% Change 2010-1995**
20	South Fork Lost Soup	SL	6	40		+34
21	Goat Creek	SL	42	42		
22	Lion Creek	SL	55	41		-14
23	Meadow Smith	SL	42	41	41	-1
24	Buck Holland	SL	34	41	41	+7
26	Porcupine Woodward	SL	21	15	15	-6
27	Piper Creek	SL	57	52		-5
28	Cold Jim	SL	42	43	43	+1
29	Hemlock Elk	SL	66	64		-2
30	Glacier Loon	SL	40	41	41	+1
34	Coram Lake Five	HH	19	14		-5

Subunits meet A19 objective of no net increase/decrease due to Forest Service actions.

* Numbers in the NEPA decision column show where the forest has made NEPA decisions that changed or will change Security CORE within a subunit.

** Percent Change number shows the difference between Jan 1995 existing to 2010 existing.

- indicates a decrease in % ORD, + indicates an increase, a blank cell indicates no change

The primary means of achieving A-19 road access and security core objectives is through road decommissioning or reclamation. Decommissioning a road improves security core while decreasing open and total road density. Once a road is made available for non-motorized access numerous studies show habitat effectiveness increases dramatically for species such as elk, grizzly bear and other large game animals and carnivores. Table 16b-9 displays miles of road decommissioned since 1995 to meet A-19 objectives. This has resulted in 157,807 acres (247 miles²) of improved habitat security as shown in Table 16b-10. Since the 2007 report an additional 29,080 acres (45.4 miles²) of CORE (areas greater than 0.3 miles from an open road) has occurred through reductions of available motorized access.

Table 16b-9. Flathead NF Road Decommissioning Mileage Summaries Since 1995

Year	Miles of Road	Cumulative
1995	69.97	
1996	40.38	110.35
1997	28.40	138.75
1998	18.36	157.11
1999	109.20	266.31
2000	37.24	303.55
2001	1.25	304.80
2002	56.54	361.34
2003	36.43	397.77
2004	41.52	439.29
2005	28.09	467.38
2006	46.66	514.04
2007	42.09	556.14
2008	48.44	604.58
2009	22.43	627.01
2010	54.84	681.85
Total	681.85	

Table 16b-10. Existing Grizzly Bear Security Core on the Flathead National Forest

	1995		2007		2010	
70 GB Subunits	Core Acres	% Core	Core Acres	% Core	Core Acres	% Core
2,223,677 ac (includes 16 mostly non-wilderness subunits (3 subunits with minor Forest ownership are not included))	1,401,926	63	1,530,653	69	1,559,733	70%

Progress in improving grizzly bear habitat quality has been made by decreasing motorized access levels and increasing security core since 1995. Over time, there have been adjustments in technology, ownership, corporate road layers and other corrections that have changed subunit percentages. These changes are all addressed in the annual report summaries. Some important changes have been the 1995 baseline re-calculation based upon two changes initiated in the 2002 report: motorized trails and CORE. First, the 1995 trail coverage was re-evaluated for motorized trails. For this recalculation, trails were considered motorized if managers knew it was receiving any motorized use in the non-denning season in 1995.¹ Second, under the security standard, CORE polygons need to be >2500 acres in size. Polygons <2500 acres could be considered as potential security habitat, but not CORE. The 1995 baseline ORD, TRD and CORE percentages used in this report included both of the above corrections. In 2003, the report pulled the tabular road information from the forests INFRA road database and connected the information to the current Arc/Info road coverage. The forest's road database is considered to be the official road information database. The FNF is using only one database for these calculations. Both MT DNRC and Plum Creek Timber Company continue to have a need for road to manage their lands and most of these new roads are being closed yearlong by gates or physical barriers. Periodic updates to their roads database are received and added to our roads database.

In addition to habitat conditions being improved by the variety of management actions applied across the forest, the FNF continues to make progress in providing more desirable habitat conditions for grizzly bears and other species and habitats through land acquisition. In addition to the 8200 acres purchased since 1996 under the land Land and Water Conservation Fund acquisition program with most of these acres in the Swan Valley, the forest recently acquired 43,900 acres in the Swan Valley from the Plum Creek Timber Corporation Legacy Lands Project. The ownership transfer of 77 parcels occurred in March 2010. These lands are a benefit to bear habitat with protection from future private development and habitat loss and by reducing the human-bear food/garbage conflict potential and displacement.

Other actions the FNF has taken include food/garbage storage restrictions outside the NCDE, prescribed burning for habitat diversity, information and education programs and efforts to minimize conflicts by purchasing bear resistant dumpsters.

¹ Motorized trails were not initially accounted for in A19 reporting as motorized trails were not a part of the foundational study (Mace and Manley South Fork Study 199?) that Amendment 19 was based. The current approach is to count all wheeled motorized access against A19 management direction.

Method 3

Grizzly bears were evaluated within 43 biological assessments carried out for projects during the 2008-2010 period. Table 16b-12 displays the number of projects, and determinations, by year since 1998. Consultation with the Fish and Wildlife Service occurs when forest biologists make a determination that the proposed project is likely to adversely affect (LAA) or when effects are not likely to adversely affect (NLAA) and are expected to be discountable, insignificant or beneficial.

Table 16b-12. Biological Assessment (BA) Determinations for Grizzly Bears.

Year	Bas # Completed	Grizzly Bear #							
1998	29	NE	17	NLAA	10	LAA	0	MB	2
1999	19	NE	14	NLAA	5	LAA	0		
2000	8	NE	3	NLAA	4	LAA	0	MB	1
2001	8	NE	2	NLAA	6	LAA	0		
2002	11	NE	1	NLAA	6	LAA	4		
2003	13	NE	2	NLAA	6	LAA	4		
2004	18	NE	5	NLAA	8	LAA	5		
2005	12	NE	0	NLAA	10	LAA	2		
2006	19	NE	4	NLAA	15	LAA	0		
2007	18	NE	2	NLAA	16	LAA	0		
2008	14	NE	2	NLAA	10	LAA	2		
2009	15	NE	0	NLAA	14	LAA	1		
2010	14	NE	2	NLAA	10	LAA	2		
Totals	198	NE	55	NLAA	120	LAA	20	MB	3

NE = No Effect, NLAA = Not Likely to Adversely Affect, LAA = Likely to Adversely Affect, MB = Beneficial

A biological assessment for all listed species is mandatory. Except in the following circumstances, all biological assessments are reviewed by the FWS either for 1) concurrence with a NLAA determination or 2) determine that a LAA determination does not jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. Consultation is not required when:

- 1) A determination is made that the project will have no effect,
- 2) In 2003, biologists from the FWS and Forest Service in Montana agreed to a programmatic approach to Section 7 consultation to expedite consistent, adequate biological review and fulfillment of Section 7 obligations for a wide range of minor projects and activities. These projects that fit within a screen have already been considered in the 2003 programmatic biological assessment consultation and will not require additional informal consultation with, and will not receive a written concurrence from, the FWS. Annual reports to FWS and periodic reviews will monitor implementation of projects that fit the programmatic biological assessment,

3) In 2004 Counterpart Regulations for Consultation under the ESA were agreed to by the FWS and action agencies to implement the Healthy Forests Initiative and streamline consultation on projects that support the National Fire Plan (NFP). NFP projects that are NLAA determinations will not undergo informal consultation with and will not receive a written concurrence from the FWS. Annual reports to FWS and periodic reviews will monitor the Counterpart Regulations implementation.

Biological assessment analysis indicates that up until 2001 most forest projects followed LRMP direction, and resulted in “no effect” or “not likely to adversely affect” determinations. During project proposal development biologists and managers strive to minimize and avoid impacts to grizzly bears and habitats by utilizing seasonal restrictions, attaining access management objectives, or by requesting a modification of proposed activities or areas.

Summary

Cooperative grizzly bear monitoring since 2004 with an NCDE population estimate study followed by trend monitoring shows the grizzly bear population and habitat occupancy is expanding.

1) The Northern Divide Grizzly Bear Project identified 563 individual grizzly bears alive in the greater NCDE during the summer of 2004 through genetic analysis of noninvasive hair sampling at baited and unbaited barbed wired hair collection sites. With a high degree of confidence the NCDE grizzly bear population estimate is 765 animals, with a range reliably estimated to be between 715 and 831 individuals. Both the raw count of 563 grizzly bears and a total population estimate of 765 for 2004 illustrate the conservative nature of the recovery plan minimum population estimate of 304 grizzly bears in 2004. The DNA-based estimate is scientifically robust, and is more than two times the recovery plan estimate.

2) A NCDE-wide population trend study is ongoing to compliment the 2004 DNA population study. Preliminary results from this study were released during a public NCDE subcommittee meeting on April 28, 2010 with a peer-reviewed journal article in press. The 7-year trend study shows an annual average growth rate of 3%.

3) The NCDE recovery zone is approximately 5.7 million acres, and with the monitoring ongoing since 2004 bears occupy at least another 2.5 million acres beyond the recovery zone for 8.2 million acres.

Recommended Action: Continue regular interagency cooperative updates and refinements to the CEM to assess grizzly bear habitat conditions as required in the 1993 grizzly bear Recovery Plan direction. Application of the CEM should continue in regular intervals to allow reassessment of habitat values and indicate trends in habitat effectiveness.

The Biological Opinion for A-19 includes a requirement for an annual monitoring report on progress in reducing open and total road density and increasing security core factors which reduce the level of take/harm and assist in bear conservation and recovery. The information from the monitoring report is critical at displaying status of grizzly bear habitat conditions and trend across the FNF and portion of the NCDE.

Biological assessment numbers have been incorporated into monitoring report Item 17. Drop this portion of this item as it is being reported elsewhere.